IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application. No.	:	10/609,079	Confirmation No. 7575
Appellant	:	Timothy J. Parker et al.	
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TC/A.U.	:	2836	
Examiner	:	Daniel J. Cavallari	
Docket No.	:	003239.P106	
Customer No.	:	8791	

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Commissioner for Patents
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SUPPLEMENTAL APPEAL BRIEF

Dear Sir:

Enclosed herewith is the Supplemental Appeal Brief prepared and filed in response to the Notice of Non-Compliant Appeal Brief mailed on October 23, 2008. Appellant submits the following Supplemental Appeal Brief pursuant to 37 C.F.R. § 41.37 for consideration by the Board of Patent Appeals and Interferences. Please charge any additional fees or credit any overpayment to our deposit Account No.02-2666. A duplicate copy of the Fee Transmittal is enclosed for this purpose.

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I. STATEMENT OF REAL PARTY IN INTEREST

The real party in interest is the assignee, Nortel Networks Limited.

II. RELATED APPEALS AND INTERFERENCES

There are no related cases, appeals or interferences known to Appellant, Appellant's legal representative, or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-3, 11-12, 15-16, 18-23, 25-28 and 32-33 are pending. Claims 4-10, 13-14, 17, 20, 24, 29-31 and 34 are withdrawn from consideration. Of the pending claims, claims 1-2, 11-12, 15, 18, 25-28 and 32-33 are rejected under 35 U.S.C. §102(e) and claims 3, 16 and 19-23 are rejected under 35 U.S.C. §103(a). Claims 19 and 21-23 have been cancelled without prejudice and Appellant hereby appeals the rejections of claims 1-3, 11-12, 15-16, 25-28 and 32-33.

IV. STATUS OF AMENDMENTS

On November 28, 2007, Appellant filed a response to an Office Action dated June 28, 2007. The Examiner issued a Final Office Action on February 20, 2008. On June 20, 2008, Appellant filed a Notice of Appeal in response to the Final Office Action. No amendments have been filed subsequent to receipt of the Final Office Action and the subject application remains under appeal. An amendment in accordance with 37 C.F.R. §41.33(b) is filed concurrently herewith.

V. SUMMARY OF CLAIMED SUBJECT MATTER

INDEPENDENT CLAIMS 1, 15 AND 25

1. A connector module (item 230, FIG. 2-3, 5 & 7; page 7, lines 19-25), being a component mounted on a circuit board (item 210, FIG. 2; FIG. 8; page 7, lines 17-21; page 20, lines 16-17), comprising:

at least one jack (item 235, FIG. 2; items 431-442, FIG. 8; page 7, line 23; page 8, line 10), adapted for coupling to a link (item 130_1, FIGs. 1-2; page 7, line 25-page 8, line 5); and

circuitry (item 300, FIGs. 3-5 & 7; page 9, lines 14-16) coupled to the jack and embedded into the connector module (item 230, FIGs. 3-5 & 7; page 9, lines 7-8), the circuitry configured to perform Power-over-Ethernet (PoE) operations (page 7, lines 23-24; page 9, lines 7-8 & 14-17) by supplying power through the jack (item 370_1, FIGs. 3-7; page 11, lines 11-15; page 16, lines 8-17).

15. A connector module (item 230, FIG. 2; page 7, lines 20-25) being a component mounted on a circuit board (item 210, FIG. 2; FIG. 8; page 7, lines 18-21; page 20, lines 16-17)) placed in a switching device (item 110, FIGs. 1-2; page 6, lines 16-20; page 7, lines 15-21), comprising:

a plurality of Ethernet jacks (item 235, FIG. 2; item 370_1-370_N, FIG. 3; page 7, line 25-page 8, line 1; page 16, lines 8-11) positioned along a side (item 205, FIG. 2; page 8, line 1) of the switching device, each adapted for coupling to a link (item 130_1, FIGs. 1-2; page 7, line 25-page 8, line 5); and

circuitry (item 300, FIGs. 3-5 & 7; page 9, lines 14-16) embedded within the component (item 230, FIG. 2; page 9, lines 7-8), coupled to the plurality of Ethernet jacks, to perform Power-over-Ethernet (PoE) operations (page 7, lines 23-24; page 9, lines 7-8 and 14-17) by supplying power through each of the plurality of Ethernet jacks (page 11, lines 11-15; page 16, lines 8-17), the circuitry comprises a filtering circuitry (item 360_1, FIGs. 3-7; page 18, lines 12-13), and a PoE circuit (item 300, FIGs. 3-5 & 7; page 9, lines 14-16), the PoE circuit to vary the amount of power supplied over any of the plurality of Ethernet jacks (page 10, lines 9-10; page 11, lines 11-15; page 11, line 22-page 12, line 2).

25. A switching device (item 110, FIGs. 1-2; page 6, lines 16-20; page 7, lines 15-21) including a connector module (item 230, FIG. 2; page7, lines 20-25) being a component mounted on a circuit board (item 210, FIG. 2, FIG. 8; page 7, lines 18-21; page 20, lines 16-17) implemented within the switching device, the switching device comprising:

a housing (item 200, FIG. 2; page 7, line 16); and

a connector module (item 230, FIG. 2-3, 5 & 7; page 7 lines 20-25) being a component mounted on a circuit board (item 210, FIG. 2, FIG. 8; page 7, lines 18-21; page 20, lines 16-17), the component including at least one jack (item 235, FIG. 2; item 370_1, FIGs. 3-5 & 7; page 7, line 23-page 8, line 1; page 16, lines 10-11) formed in the housing and power-over-Ethernet (PoE) circuitry (items 300, 340_1 & 360_1, FIGs. 3-5 & 7; page 9, lines 7-8 and 14-16; page 16, lines 8-17) embedded within the component and directly coupled to the at least one jack (items 364_1-364_Z, FIGs. 3-7; page 19, lines 7-11).

DEPENDENT CLAIMS 2-3, 11-12, 16, 18, 26-28 AND 32-33:

2. The connector module of claim 1 being an Ethernet jack module with the embedded circuitry with PoE functionality and the jack being an Ethernet jack (item 235, FIG. 2; page 7, lines 22-24; page 8, lines 9-15).

3. The connector module of claim 1, wherein the Ethernet jack is either an RJ-45 jack or an RJ-21 jack (page 8, lines 9-15).

11. The connector module of claim 1 being implemented on the circuit board within a switching device (item 110, FIGs. 1-2; page 6, lines 16-20; page 7, lines 15-21) including a housing (item 200, FIG. 2; page 7, lines 15-21) substantially enclosing the connector module with at least the jack accessible from a side (item 205, FIG. 2; page 8, line 1) of the housing for coupling to the link.

12. The connector module of claim 2 being adapted within a switching device to receive direct current (DC) voltage from an externally located power supply (page 13, lines 5-8) and, under control of the circuitry embedded within the connector module, to transmit power from the at least one Ethernet jack of the connector module (page 9, lines 14-16; page 11, lines 11-15; page 12, lines 5-7).

16. The connector module of claim 15, wherein the circuitry further comprises a plurality of light emitting diodes(item 350_1, FIGs. 3-5 & 7; page 7, lines 23-25) each corresponding to one of the plurality of Ethernet jacks (page 9, 17-21; page 16, lines 15-17; page 17, lines 12-15), each light emitting diode operating in a first state when the link

is disconnected from its corresponding Ethernet jack (page 17, lines 20-23) and in a second state when the link is coupled to its corresponding Ethernet jack (page 17, lines 23-25).

18. The connector module of claim 15, wherein the PoE circuit of the circuitry is coupled to the filtering circuitry (page 18, lines 12-13).

26. The switching device of claim 25 wherein the connector module is an Ethernet jack module (page 7, lines 22-23).

27. The switching device of claim 25, wherein the housing further includes an output to supply power to a first connector module neighboring the connector module (page 15, lines 11-15).

28. The switching device of claim 27, wherein the housing further includes an input to receive power from a second connector module neighboring the connector module so as to form a cascading connection between the first neighboring connector module and the second neighboring connector module (page 15, lines 14-15).

32. The switching device of claim 25, wherein the housing comprises (i) a first input adapted to receive power from a first neighboring connector module and (ii) a first output adapted to provide power to a second neighboring connector module (page 15, lines 11-15).

33. The switching device of claim 32, wherein the housing further comprises a cascade serial communication interface (item 308, FIG. 3; page 14, lines 7-10) adapted for coupling to a serial communication interface of the first neighboring connector module.

VI. ISSUES TO BE REVIEWED ON APPEAL

1. Claims 1 and 11 stand rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam (U.S. Patent Application No. 2003/0099076 A1);
2. Claims 2, 12 and 26 stand rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam;

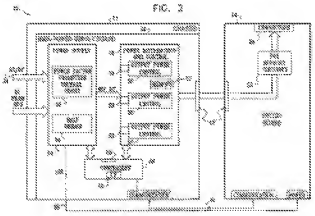
3. Claims 15, 16 and 18 and rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam; and

4. Claim 25, 27-28 and 32-33 stand rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam.

VII. ARGUMENTS

In the Office Action, claims 1-2, 11-12, 15, 18, 25-28 and 32-33 are rejected under 35 U.S.C. §102(e). Claim 3, 19 and 21-23 are rejected under 35 U.S.C. §103(a). Certain grounds for traversing the outstanding rejections are outlined and reversal of each of the outstanding rejections by the Board is respectfully requested.

In rejecting claims 1-2, 11-12, 15, 18, 25-28 and 32-33 under 35 U.S.C. §102(e), the Examiner cites Elkayam (U.S. Patent Application No. 2003/0099076 A1). *See page 3 of the Final Office Action.* Elkayam describes an Ethernet switch (26) that comprises a Power over LAN module (12) and an Ethernet switch board (14) as shown in FIG. 2 below. *See paragraph [0069], lines 1-4; FIGs. 1-2 of Elkayam.*



Herein, the Power over LAN module (12) is implemented to provide regulated DC power for switch board (14). *See paragraph [0071], lines 1-2; FIGs. 1-2 of Elkayam.* The Power over LAN module (12) is referenced as a self-contained Power over LAN system such as a PD-IM-7024 module by PowerDsine Ltd. *See paragraph [0071], lines 15-16 of Elkayam.*

More specifically, as above in FIG. 2, components of module (12) are attached to a module chassis (11). *See paragraph [0071], lines 8-10; FIGs. 1-2 of Elkayam.* These components include a power supply (50), power distribution and control circuitry (56) and connector (40). The power supply (50) receives AC power from line connector (34) and/or DC power from a DC input, and generates regulated DC power such as 12 volts (V) DC and 48V DC. *See paragraph [0073], lines 3-7; FIG. 2 of Elkayam.* The power distribution and control circuitry (56) receives the regulated DC power and outputs the DC power over the connector (40) to the Ethernet switch board (14). *See paragraph [0075], lines 1-3; FIG. 2 of Elkayam.* The Ethernet switch board (14) features power over LAN support circuitry (55). *See paragraph [0075], lines 3-4; FIG. 2 of Elkayam.* The power over LAN support circuitry (55) receives the regulated DC power, such as 48V DC, and provides the same to connector (24) so that each cable (32) conveys power. *See paragraph [0075], lines 4-7; FIGs. 1-2 of Elkayam.*

The teachings of Elkayam are directed to the application of power levels compliant with IEEE 802.3af, namely Power Over Ethernet (PoE) power levels, through the use of an on-board power supply (50), power distribution and control circuitry (56) and power over LAN support circuitry (55), all of which are separately mounted on multiple boards. A similar technique is described in the General Background section of the subject application. As a result, the switching device (26) of Elkayam would likely suffer from similar problems: unacceptable costs to deploy and maintain such power supply systems and unacceptable delays power supply delays.

One primary difference between the claimed invention and the teachings of Elkayam is that the claims are directed to the implementation of PoE functionality within the connector module itself. The "connector module" is a component mounted to a circuit board. *See paragraph [0057] of the subject application.* The connector module, also referred to in the specification as the "Ethernet jack module 230," is embedded with PoE components. *See paragraph [0022&0025] of the subject application.*

A. §102(e) Rejection of Claims 1 and 11

Claims 1-2, 11-12, 15, 18, 25-28 and 32-33 were rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam (U.S. Patent Application No. 2003/0099076 A1). In

particular, with respect to claims 1 and 11, Appellant respectfully submits that a *prima facie* case of anticipation cannot be established.

As the Board is aware, to anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Vergegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). Appellant respectfully submits that a *prima facie* case of anticipation has not been established by the Examiner because all of the limitations set forth in claims 1 and 11 are not described in Elkayam.

Elkayam is directed to a daughter card/motherboard implementation. The Examiner has interpreted a module chassis (11) of a Power over LAN module (12) as the claimed connector module. *See page 4 of the Final Office Action dated February 20, 2008.* Appellant believes that this interpretation is improper since the module chassis (11) is not a "component mounted on a circuit board (read on by switch board 14)" as contended by the Examiner. Claim 1 is directed to a connector module, namely a component that can be mounted on a circuit board, which comprises at least one jack and circuitry that is embedded into the connector module and performs Power over Ethernet (PoE) operations. The module chassis (11) does not a connector module as claimed.

Appellant acknowledges that the term "connector module" is explicitly defined within the preamble of claim 1 as "being a component mounted to a circuit board." This definition is consistent with the definition set forth in the specification. *See paragraph [0057] of the subject application.* However, Appellant disagree that this definition does not have patentable weight.

In accordance with MPEP §2111.02, "[a]ny terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation." See *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989); *Pac-Tec Inc. v. Amerace Corp.*, 903 F.2d 796, 801, 14 USPQ2d 1871, 1876 (Fed. Cir. 1990). The "component" architecture of the connector module is a

structural limitation, and thus, the connector module, which is also recited within the body of the claim, should be considered as a component that can be mounted on a circuit board.

Additionally, Appellant respectfully submits that dependent claim 11 recites the connector module as being "implemented on the circuit board within a switching device including a housing substantially enclosing the connector module with at least the jack accessible from a side of the housing for coupling to the link." This limitation cannot be overlooked as directly contradicting the Examiner's improper interpretation of the connector module.

In accordance with the interpretation of the "connector module" that is set forth in the claims and supported by the specification of the subject application, Appellant respectfully requests the Board to reverse the outstanding §102(e) rejection as applied to claims 1 and 11 because Elkayam clearly does not describe a component (connector module) with the embedded PoE functionality as claimed.

B. §102(e) Rejection of Claims 2-3, 12 and 26

Claims 2, 12 and 26 were rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam (U.S. Patent Application No. 2003/0099076 A1). Herein, Appellant respectfully submits that a *prima facie* case of anticipation cannot be established.

For instance, with respect to dependent claims 2 and 26, these claims specifically include the limitation that the connection module is an Ethernet jack module. Hence, the embedded circuitry is circuitry within the Ethernet jack module itself. In contrast, Elkayam teaches the implementation of a Power over LAN module (12), which is represented as a system including a chassis (11) and main power supply board (51). One example of such a system is PowerDsine's PD-IM-7024™ Power over LAN module, which neither constitutes an Ethernet jack module (claims 2, 26) nor constitutes any particular type of jack (claim 3) such as an RJ-45 jack or an RJ-21 jack.

Hence, Appellant respectfully requests the Board to reverse the outstanding §102(e) rejection as applied to claims 2 and 26. Claims 3 and 12 depends on claim 2, and thus, these claims are allowable based on the allowability of claim 2.

C. §102(e) Rejection of Claims 15-16 and 18

Claims 15-16 and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam. Appellant respectfully submits that a *prima facie* case of anticipation has not been established because Elkayam fails to teach each and every limitations set forth in these claims. As an example, Elkayam does not describe the claimed element that the connection module, structurally defined within the preamble claim 15 as a component mounted to a circuit board that comprises "circuitry embedded within the component…to perform Power-over-Ethernet (PoE) operations." In the specification, the "connection module" is also referred to as the "Ethernet jack module 230," which is embedded with PoE components. *See paragraph [0022&0025] of the subject application.*

In contrast, as previously stated, Elkayam is directed to a daughter card/motherboard implementation and does not describe the connector module (component mounted on circuit board) with embedded circuitry to perform PoE operations as claimed. The daughter card (Ethernet switch board 14) of Elkayam features Ethernet connectors (24) that clearly are not embedded with circuitry that performs PoE operations. Moreover, the module chassis (11) cannot be construed as the claimed connector module since it cannot be construed as a component mounted on a circuit board as claimed.

In conclusion, since Elkayam does not describe a component (connector module) with embedded circuitry to perform PoE operations as claimed, Appellant respectfully requests that the Board to reverse the outstanding §102(e) rejection of independent claim 15 as well as claims 16 and 18 dependent thereon.

D. §102(e) Rejection of Claim 25, 27-28 and 32-33

Claim 25, 27-28 and 32-33 were rejected under 35 U.S.C. §102(e) as being anticipated by Elkayam. Appellant respectfully submits that a *prima facie* case of anticipation has not been established because Elkayam fails to teach all of the limitations set forth in these claims.

For instance, with respect to independent claim 25, Elkayam does not describe the claimed elements of a connection module, which are explicit limitations within the body of the claim. The connection module is limited as being a "component mounted on a circuit

board, the component including at least one jack formed in the housing and power-over-Ethernet (PoE) circuitry embedded within the component and directly coupled to the at least one jack."

In contrast, Elkayam is directed to a daughter card/motherboard implementation and does not describe the connector module with PoE circuitry embedded within the component that is mounted on a circuit board and includes at least one jack. Instead, Elkayam teaches the mounting of sub-circuits (58) on a main power supply board (51) that, accompanied by the operations of the power-over-LAN support circuitry (55), perform PoE functions, where such circuitry is separate from and not embedded within the connector (24). *See FIG. 2 of Elkayam and paragraph [0076].*

In conclusion, since Elkayam does not describe a connection module that is mounted on a circuit board and includes at least one jack and PoE circuitry embedded within the component itself, Appellant respectfully requests that the Board reverse the outstanding §102(e) rejection as applied to independent claim 25 as well as claims 27-28 and 32-33 dependent thereon.

VIII. CONCLUSION

Appellant respectfully requests that the Board enter a decision overturning the Examiner's rejection of all pending claims, and holding that the claims satisfy the requirements of 35 U.S.C. §103.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: November 21, 2008

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IX. CLAIM APPENDIX

The claims of the present application which are involved in this appeal are as follows:

1. (Previously Presented) A connector module being a component mounted on a circuit board, comprising:

at least one jack adapted for coupling to a link; and

circuitry coupled to the jack and embedded into the connector module, the circuitry configured to perform Power-over-Ethernet (PoE) operations by supplying power through the jack.

2. (Previously Presented) The connector module of claim 1 being an Ethernet jack module with the embedded circuitry with PoE functionality and the jack being an Ethernet jack.

3. (Original) The connector module of claim 1, wherein the Ethernet jack is either an RJ-45 jack or an RJ-21 jack.

11. (Previously Presented) The connector module of claim 1 being implemented on the circuit board within a switching device including a housing substantially enclosing the connector module with at least the jack accessible from a side of the housing for coupling to the link.

12. (Previously Presented) The connector module of claim 2 being adapted within a switching device to receive direct current (DC) voltage from an externally located power supply and, under control of the circuitry embedded within the connector module, to transmit power from the at least one Ethernet jack of the connector module.

15. (Previously Presented) A connector module being a component mounted on a circuit board placed in a switching device, comprising:

a plurality of Ethernet jacks positioned along a side of the switching device, each adapted for coupling to a link; and

circuitry embedded within the component, coupled to the plurality of Ethernet jacks, to perform Power-over-Ethernet (PoE) operations by supplying power through each of the plurality of Ethernet jacks, the circuitry comprises a filtering circuitry and a PoE circuit, the PoE circuit to vary the amount of power supplied over any of the plurality of Ethernet jacks.

16. (Original) The connector module of claim 15, wherein the circuitry further comprises a plurality of light emitting diodes each corresponding to one of the plurality of Ethernet jacks, each light emitting diode operating in a first state when the link is disconnected from its corresponding Ethernet jack and in a second state when the link is coupled to its corresponding Ethernet jack.

25. (Previously Presented) A switching device including a connector module being a component mounted on a circuit board implemented within the switching device, the switching device comprising:

a housing; and

a connector module being a component mounted on a circuit board, the component including at least one jack formed in the housing and power-over-Ethernet (PoE) circuitry embedded within the component and directly coupled to the at least one jack.

26. (Previously Presented) The switching device of claim 25 wherein the connector module is an Ethernet jack module.

27. (Previously Presented) The switching device of claim 25, wherein the housing further includes an output to supply power to a first connector module neighboring the connector module.

28. (Previously Presented) The switching device of claim 27, wherein the housing further includes an input to receive power from a second connector module neighboring the connector module so as to form a cascading connection between the first neighboring connector module and the second neighboring connector module.

32. (Previously Presented) The switching device of claim 25, wherein the housing comprises (i) a first input adapted to receive power from a first neighboring connector module and (ii) a first output adapted to provide power to a second neighboring connector module.

33. (Previously Presented) The switching device of claim 32, wherein the housing further comprises a cascade serial communication interface adapted for coupling to a serial communication interface of the first neighboring connector module.

X. EVIDENCE APPENDIX

None.

XI. RELATED PROCEEDINGS APPENDIX

None.